AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A data transmission system comprising:

a plurality of information transmitters connected to nodes on a bus, for transferring data through a connection established between the nodes;

a connection establishing device for establishing a connection at each node;

a connection status information holding device for holding connection status information indicating a managing status of isochronous resources as bus resources while updating it during the execution of the connection establishment at each node, the managing status of the isochronous resources including an unknown status, a valid status, an invalid status, and a status of processing being executed;

a connection status information referring device for referring to the connection status information; and

a processing executing device for executing predetermined processing to avoid unmanageable status of the isochronous resources when it is determined that the ~~managing status of the bus resources~~ unknown status is out of a permissible range~~,~~

~~wherein the managing status of the isochronous resources indicated by the connection status information includes, in addition to an unknown status, a valid status, an invalid status, and a status of processing being executed~~.

2. (original): The data transmission system according to claim 1, wherein

a plurality of connection establishments are provided corresponding to types of the connections, and

the connection status information holding device holds the connection status information for each connection establishment.

3. (original): The data transmission system according to claim 1, wherein

the processing executing device generates bus resetting if a predetermined number or more of bits of the connection status information set in unknown statuses are present among connections to be established on the bus.

4. (canceled)

5. (original): The data transmission system according to claim 1, wherein

the connection establishments include processing for allocating a channel for interconnecting the nodes, and processing for allocating a band necessary for data transmission, and

the connection status information holding device updates the connection status information to an unknown status if a transaction in each processing results in a timeout or a data error.

6 (original): The data transmission system according to claim 2, wherein

the bus is a serial bus compliant with IEEE 1394 Standard, and

the plurality of connection establishments include establishment of a Broadcast-out connection, establishment of a Broadcast-in connection, and establishment of a Point-to-point connection.

7. (original): The data transmission system of claim 6, wherein the plurality of connection establishments includes restoration of the Broadcast-out connection, restoration of the Broadcast-in connection, and restoration of the Point-to-point connection in accordance with connection restoration carried out to restore the connection at each node before a passage of predetermined time after resetting of the connection established following the bus resetting.

8. (currently amended): A connection establishing method for establishing a connection between nodes of a data transmission system in which a plurality of information transmitters connected to the nodes on a bus transmit data, comprising the processes of:

holding connection status information indicating a managing status of isochronous resources as bus resources while updating it during the execution of the connection establishment at each node, the managing status of the isochronous resources including an unknown status, a valid status, an invalid status, and a status of processing being executed;

referring to the connection status information; and

executing predetermined processing to avoid unmanageable status of the isochronous resources when it is determined that the ~~managing status of the bus resources~~ unknown status is out of a permissible range~~,~~

~~wherein the managing status of the isochronous resources indicated by the connection status information includes, in addition to an unknown status, a valid status, an invalid status, and a status of processing being executed~~.

9. (original): The connection establishing method according to claim 8, wherein

a plurality of connection establishments are provided corresponding to types of the connections, and

the connection status information holding process holds the connection status information for each connection establishment.

10. (original): The connection establishing method according to claim 8, wherein

the predetermined processing executing process generates bus resetting if a predetermined number or more of bits of the connection status information set in unknown statuses are present among connections to be established on the bus.

11. (canceled):

12. (original): The connection establishing method according to claim 8, wherein

the connection establishments include processing for allocating a channel for interconnecting the nodes, and processing for allocating a band necessary for data transmission, and

the connection status information holding process updates the connection status information to an unknown status if a transaction in each processing results in a timeout or a data error.

13. (original): The connection establishing method according to claim 9, wherein

the bus is a serial bus compliant with IEEE 1394 Standard, and

the plurality of connection establishments include establishment of a Broadcast-out connection, establishment of a Broadcast-in connection, and establishment of a Point-to-point connection.

14. (currently amended): An information transmission apparatus connected to a node on a bus, for transmitting and receiving data through a connection established with another node, comprising:

a connection establishing device for establishing the connection with another node;

a connection status information holding device for holding connection status information indicating a managing status of isochronous resources as bus resources while updating it during the execution of the connection establishment, the managing status of the isochronous resources

including an unknown status, a valid status, an invalid status, and a status of processing being executed;

a connection status information referring device for referring to the connection status information; and

a processing executing device for executing predetermined processing to avoid unmanageable status of the bus resources when it is determined that the ~~managing status of the bus resources~~ unknown status is out of a permissible range~~,~~

~~wherein the managing status of the isochronous resources indicated by the connection status information includes, in addition to an unknown status, a valid status, an invalid status, and a status of processing being executed~~.

15. (original): The information transmission apparatus according to claim 14, wherein

a plurality of connection establishments are provided corresponding to types of the connections, and

the connection status information holding device holds the connection status information for each connection establishment.

16. (original): The information transmission apparatus according to claim 14, wherein

the processing executing device generates bus resetting if a predetermined number or more of bits of the connection status information set in unknown statuses are present among connections to be established on the bus.

17. (canceled)

18. (original): The information transmission apparatus according to claim 14, wherein

the connection establishments include processing for allocating a channel for interconnecting the nodes, and processing for allocating a band necessary for data transmission, and

the connection status information holding device updates the connection status information to an unknown status if a timeout or a data error occurs in each processing.

19. (original): The information transmission apparatus according to claim 15, wherein

the bus is a serial bus compliant with IEEE 1394 Standard, and

the plurality of connection establishments include establishment of a Broadcast-out connection, establishment of a Broadcast-in connection, and establishment of a Point-to-point connection.

20. (original): The information transmission apparatus according to claim 15, wherein

the plurality of connection establishments includes restoration of the Broadcast-out connection, restoration of the Broadcast-in connection, and restoration of the Point-to-point connection in accordance with connection restoration carried out to restore the connection at

each node before a passage of predetermined time after resetting of the connection established following the bus resetting.